

**June 7, 2002**

Mr. James Hunsicker  
Naval Surface Warfare Center, Crane Division  
Building 3260, Code 09510  
300 Highway 361  
Crane, Indiana 47522

Re: 101-14772  
Significant Source Modification to:  
Part 70 permit No.: T101-7341-00005

Dear Mr. Hunsicker:

Naval Surface Warfare Center, Crane Division was issued Part 70 operating permit T101-7341-00005 on May 15, 2001. An application to modify the source was received on August 9, 2001. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

- (r) One (1) mobile plasma treatment system (MPTS), identified as P02, located near fire house 2, with a maximum capacity of 3600 pounds per hour gross weight of explosives, 500 pounds per hour net explosive weight (NEW), equipped with one (1) afterburner for VOC and CO control, one (1) semi-dry scrubber for HCl and PM control, and one (1) Selective Catalytic Reduction (SCR) unit for NO<sub>x</sub> control and exhausting at stack S02. The semi-dry scrubber is composed of an evaporative cooler, sodium bicarbonate injection, and a pulse-jet baghouse.
- (s) One (1) oil-fueled, 4160-volt, 1000 kW generator which powers the MPTS exhausting at stack S03.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Mike Heaney, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7870 to speak directly to Mr. Heaney. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments  
ERG/MH

cc: File - Martin County  
Martin County Health Department  
Air Compliance Section Inspector - Gene Kelso  
Compliance Data Section - Karen Nowak  
Administrative and Development - Sara Cloe  
Technical Support and Modeling - Michele Boner

# **PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY**

**Naval Surface Warfare Center, Crane Division  
300 Highway 361  
Crane, Indiana 47522**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T101-7341-00005	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: May 15, 2001  Expiration Date: May 14, 2006

First Significant Source Modification: 101-14493-00005, Issued January 4, 2002  
First Significant Permit Modification: 101-14789-00005, Issued January 22, 2002

Second Significant Source Modification: 101-14772-00005	Affected Pages: 117 through 127, 136, 137
Original signed by Paul Dubenetzky Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 7, 2002

## **SECTION D.22 FACILITY OPERATION CONDITIONS - Mobile Plasma Treatment System**

### **Facility Description [326 IAC 2-7-5(15)]:**

- (r) One (1) mobile plasma treatment system (MPTS), identified as P02, located near Building 69, with a maximum capacity of 3600 pounds per hour gross weight of explosives, 500 pounds per hour net explosive weight (NEW), equipped with one (1) afterburner for VOC and CO control, one (1) semi-dry scrubber for HCl and PM control, and one (1) Selective Catalytic Reduction (SCR) unit for NO<sub>x</sub> control and exhausting at stack S02. The semi-dry scrubber is composed of an evaporative cooler, sodium bicarbonate injection, and a pulse-jet baghouse.
- (s) One (1) diesel-fueled, 4160-volt, 1000 kW generator which powers the MPTS exhausting at stack S03.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### **Emission Limitations and Standards [326 IAC 2-7-5(1)]**

#### **D.22.1 PSD Minor Net Emission Increase Limit [326 IAC 2-2][40 CFR 52.21]**

The MPTS shall be limited to 1800 hours per year and the total amount of diesel fuel used in the generator engine shall be limited to 89,604 gallons per twelve (12) consecutive month period. This will limit the NO<sub>x</sub> emissions from the MPTS (with generator) to less than 25.41 tons per year and the CO emissions to less than 2.91 tons per year. These limits, together with the limits on the CDC in Condition D.21.1, are required to limit the potential to emit of NO<sub>x</sub> and CO to less than 40 tons and 100 tons, respectively, per twelve (12) consecutive month period. Compliance with these limits makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

#### **D.22.2 RCRA Air Standards and Limitations**

The Permittee shall comply with all self-implementing provisions of any future air regulations promulgated under the provisions of Section 30004(n) of RCRA, as amended by HSWA.

#### **D.22.3 Incinerator Requirements [326 IAC 4-2]**

Pursuant to 326 IAC 4-2, the incinerator shall:

- (a) Consist of primary and secondary chambers or the equivalent;
- (b) Be equipped with a primary burner unless burning wood products;
- (c) Comply with 326 IAC 5-1 and 326 IAC 2;
- (d) Be maintained properly as specified by the manufacturer and approved by the commissioner;
- (e) Be operated according to the manufacturer's recommendations and only burn waste approved by the commissioner;
- (f) Comply with other state and/or local rules or ordinances regarding installation and operation of incinerators;
- (g) Be operated so that emissions of hazardous material including but not limited to viable pathogenic bacteria, dangerous chemicals or gases, or noxious odors are prevented;

- (h) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas at standard condition corrected to fifty percent (50%) excess air; and
- (i) Not create a nuisance or fire hazard.

If any of the above result, the burning shall be terminated immediately.

#### D.22.4 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR 63, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the MPTS as described in this section except when otherwise specified in 40 CFR 63, Subpart EEE.

#### D.22.5 NESHAP Emissions Limitation [40 CFR 63.1203(b), Subpart EEE]

The following emission limits apply:

- (a) Dioxin/Furan emissions shall not exceed 0.20 nanograms toxicity equivalent (TEQ) per dry standard cubic meter corrected to seven percent oxygen.
- (b) Mercury emissions shall not exceed 45 micrograms per dry standard cubic meter corrected to seven percent oxygen.
- (c) Lead and cadmium combined emissions shall not exceed 120 micrograms per dry standard cubic meter corrected to seven percent oxygen.
- (d) Arsenic, beryllium, and chromium combined emissions shall not exceed 97 micrograms per dry standard cubic meter corrected to seven percent oxygen.
- (e) Carbon monoxide and hydrocarbon emissions shall comply with either (1) or (2) below:
  - (1) Hydrocarbons in the main stack shall not exceed 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to seven percent oxygen, and reported as propane; or
  - (2) Carbon monoxide in the main stack shall not exceed 100 parts per million by volume, over an hourly rolling average monitored continuously with a continuous emissions monitoring system (CEMS), dry basis and corrected to seven percent oxygen; and in addition, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by 40 CFR 63.1206(b)(7), hydrocarbons shall not exceed 10 parts per million by volume over an hourly rolling average (monitoring continuously with a CEMS), dry basis, corrected to seven percent oxygen, and reported as propane.
- (f) Hydrochloric acid and chlorine gas combined emissions shall not exceed 21 parts per million by volume, expressed as hydrochloric acid equivalents, dry basis, corrected to seven percent oxygen.
- (g) Particulate matter (PM) emissions shall not exceed 34 milligrams per dry standard cubic meter.
- (h) When hazardous waste is not in the plasma chamber and the Permittee has documented in the operating record that the source is complying with all other applicable requirements of this permit, 40 CFR Subpart EEE shall not apply except for the notification, reporting, and record requirements of sections 63.1203 through 63.1205; the monitoring and compliance standards of this section and sections 63.1207 through

63.1209, except the modes of operation requirements of section 63.1209(q); and the notification, reporting, and recordkeeping requirements of sections 63.1210 through 63.1212.

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**D.22.6 Destruction and Removal Efficiency Standard [40 CFR 63.1203(c), Subpart EEE]**

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- (a) The Permittee shall specify one or more principle organic hazardous constituents (POHCs) from the list of HAPs for each waste to be burned based on the degree of difficulty of treating that constituent and on its concentration or mass in the feed.
- (b) The Permittee shall achieve a destruction and removal efficiency (DRE) of 99.99% for each POHC. DRE shall be calculated using the equation:

$$DRE = [1 - W_{out}/W_{in}] \times 100\%$$

Where:

$W_{in}$  = mass feedrate of one POHC in a waste feedstream; and  
 $W_{out}$  = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere

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**D.22.7 Automatic Waste Feed Cutoff (AWFCO) [40 CFR 63.1206(c)(3), Subpart EEE]**

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The Permittee shall operate the MPTS with a functioning system that immediately and automatically cuts off the hazardous waste feed, except during a ramp down procedure under the following conditions:

- (a) When any of the following are exceeded:
  - (1) Operating parameter limits specified under Condition D.22.15.
  - (2) an emission standard monitored by a CEMS, or
  - (3) the allowable plasma chamber pressure.
- (b) When the span value of any CMS detector, except a CEMS, is met or exceeded;
- (c) Upon malfunction of a CMS monitoring an operating parameter limit specified under Condition D.22.15 or an emission level; or
- (d) When any component of the automatic waste feed cutoff system fails.

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**D.22.8 Establishing Feedrate Limits [40 CFR 63.1209]**

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- (a) In order to demonstrate compliance with the destruction and removal efficiency of Condition D.22.6 and the standards of Condition D.22.5, the Permittee must establish limits on the maximum pumpable and total (i.e., pumpable and nonpumpable) hazardous waste feedrate for each location where hazardous waste is fed. These limits must be established as the average of the maximum hourly rolling averages for each run. The Permittee must also establish a 12-hour rolling average limit for the feedrate of mercury, semivolatile and low volatile metals, chlorine and chlorides. [63.1209(j)(3), (k)(4), (l)(1), (n)(2), (o)(1)]
- (b) Prior to feeding the material, the Permittee must obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits.
  - (1) The Permittee must develop and implement a feedstream analysis plan and record it in the operating record. The plan must specify the parameters for which the Permittee will analyze each feedstream to ensure compliance with the operating parameter limits.

- (2) The Permittee must submit the feedstream analysis plan to IDEM, OAQ for review and approval, if requested [63.1209(c)]

#### D.22.9 Plasma Chamber Leaks [40 CFR 63.1206(c)(5), Subpart EEE]

- (a) The Permittee shall control plasma chamber leaks by:
  - (1) keeping the combustion zone sealed, or
  - (2) maintaining the maximum combustion zone pressure lower than ambient pressure using an instantaneous monitor.
- (b) The leak control method must be specified in the operating record.

#### D.22.10 Operator Training and Certification [40 CFR 63.1206(c)(6), Subpart EEE]

- (a) The Permittee shall establish training programs for all categories of personnel whose activities may reasonably be expected to directly affect emissions.
  - (1) The Permittee shall ensure that the MPTS is operated and maintained at all times by persons who are trained and certified to perform these duties.
  - (2) A certified control room operator must be on duty at the site at all times the source is in operation. A hazardous waste incinerator control room operator must:
    - (A) Be trained and certified under a site-specific, source-developed and implemented program that meets the requirements of paragraph §63.1206(c)(6)(v); or
    - (B) Be trained under the requirements of, and certified under, the American Society of Mechanical Engineers Standard Number QHO-1-1994 and QHO-1a-1996 Addenda; or
    - (C) Be trained and certified under a state program.
  - (3) To maintain control room operator qualification under a site-specific, source developed and implemented training program as provided by paragraph §63.1206(c)(6)(v), control room operators must complete an annual review or refresher course.
  - (4) The Permittee shall record the operator training and certification program in the operating record.

#### D.22.11 Operation and Maintenance [326 IAC 2-7-5(13)][40 CFR 63.1206(c)(7), Subpart EEE]

- (a) The Permittee must prepare and at all times operate according to an operation and maintenance plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the MPTS, including associated pollution control equipment, that could affect emissions of regulated hazardous air pollutants.
- (b) The plan must prescribe how the MPTS will be operated and maintained in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test.
- (c) This plan ensures compliance with the operation and maintenance requirements of §63.6(e) and minimizes emissions of pollutants, automatic waste feed cutoffs, and malfunctions.

- (d) The operating and maintenance plan must include a corrective measures plan that specifies the procedures the Permittee will follow in the case of a bag leak detection system alarm. The corrective measures plan must include, at a minimum, the procedures used to determine and record the time and cause of the alarm as well as the corrective measures taken to correct the control device malfunction or minimize emissions as specified below. Failure to initiate the corrective measures required by this paragraph is failure to ensure compliance with the emission standards.
- (e) The Permittee must record the plan in the operating record.

**D.22.12 Broken or Failed Bag Detection [40CFR 63.1206(c) (7)(ii)(D)]**

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The Permittee must continuously operate a bag leak detection system that meets the specifications and requirements below and must comply with the corrective measures requirements of paragraph §63.1206(c)(7)(ii)(B):

- (a) The bag leak detection system must be certified by the manufacturer to be capable of continuously detecting and recording particulate matter emissions at concentrations of 1.0 milligram per actual cubic meter, unless it is demonstrated, pursuant to §63.1209(a)(1), that a higher sensitivity would adequately detect bag leaks;
- (b) The bag leak detection system sensor must provide output of relative particulate matter loadings;
- (c) The bag leak detection system must be equipped with an alarm system that will sound an audible alarm when an increase in relative particulate loadings is detected over a preset level;
- (d) The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system;
- (e) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time;
- (f) Following initial adjustment, the Permittee must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except where detailed in the Operation and Maintenance Plan. The Permittee must not increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition;
- (g) For negative pressure or induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector shall be installed downstream of the baghouse and upstream of any wet acid gas scrubber; and
- (h) Where multiple detectors are required, the system's instrumentation and alarm system may be shared among the detectors.

**Compliance Determination Requirements**

**D.22.13 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1-3(i)(8)] [326 IAC 2-1.1-11]  
[40 CFR 63.1207, Subpart EEE]**

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- (a) No later than six months after the MPTS begins operation, the Permittee shall demonstrate initial compliance with the emission limits established in Condition D.22.5 by



commencing initial comprehensive performance tests in accordance with 40 CFR 63.1207 and Section C - Performance Testing. These tests shall also establish limits for the operating parameters as provided in 40 CFR 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems (CMS). The testing must be completed within 60 days after the date of commencement. Comprehensive performance tests shall be repeated at least once every 61 months from the date of the most recent valid compliance demonstration. Based on the results of previous stack tests, IDEM may, at its discretion, allow the Permittee to skip one test cycle.

- (b) The Permittee shall commence confirmatory performance testing no later than 31 months after the date of commencing the previous comprehensive performance test. The testing must be completed within 60 days after the date of commencement. Confirmatory performance tests are conducted to:
  - (1) Demonstrate compliance with the dioxin/furan emission standard when the source operates under normal operating conditions; and
  - (2) Conduct a performance evaluation of continuous monitoring systems required for compliance assurance with the dioxin/furan emission standard under §63.1209(k).
- (c) Pursuant to 326 IAC 3-6-3(b)(2), 40 CFR 63.7(e) and 40 CFR 63.1207(g), the tests shall be conducted under representative operating conditions.
- (d) Pursuant to 326 IAC 3-6-3(b), during the performance tests, the MPTS must be operating at 95 percent of its maximum production capacity or more, or under other capacities or conditions specified and approved by IDEM, to be considered a valid test.
- (e) The Permittee shall submit a site-specific test plan meeting the requirements of 40 CFR 63.1207(f) to the IDEM, OAQ at least:
  - (1) one year before a comprehensive performance test, and
  - (2) at least 60 days before a confirmatory performance test.
- (f) The Permittee must establish separate semivolatile metal, low volatile metal, mercury, and total chlorine (organic and inorganic), and/or ash feedrate limits for each feedstream for which the comprehensive performance test feedstream analysis determines that these constituents are not present at detectable levels.
- (g) Testing shall be conducted in accordance with Section C - Performance Testing.

D.22.14 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-7-6(1),(6)] [40 CFR 63, Subpart A]

- (a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2 and 40 CFR 63, Subpart EEE, a CEMS shall be installed, calibrated, maintained, and continuously operated pursuant to 326 IAC 3-5. The CEMS shall be installed and operational prior to conducting the performance tests required in Condition D.22.13. The CEMS shall meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 63.8(c).
- (b) Pursuant to 40 CFR 63, Subpart EEE, a CEMS shall be installed, calibrated, maintained, and operated to demonstrate compliance with the carbon monoxide and hydrocarbon limits specified in 40 CFR 63 and Condition D.22.5. An oxygen CEMS shall also be installed, calibrated, maintained, and operated to continuously correct the carbon monoxide and hydrocarbon levels to 7 percent oxygen. [63.1209(a)(1)(i)]

- (c) The Permittee must install, calibrate, maintain, and operate a particulate matter CEMS to demonstrate and monitor compliance with the particulate matter standards under Condition D.22.5(g). However, compliance with the requirement to install, calibrate, maintain and operate the PM CEMS is not required until such time that the EPA promulgates all performance specifications and operational requirements applicable to PM CEMS. [63.1209(a)(1)(iii)]

#### D.22.15 Monitoring [40 CFR 63.1209]

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- (a) To comply with the applicable feedrate limits established in Condition D.22.8, the Permittee must monitor and record feedrates as follows:
  - (1) Determine and record the value of the parameter for each feedstream by sampling and analysis or other method;
  - (2) Determine and record the mass or volume flowrate of each feedstream by a CMS. If the Permittee determines the flowrate of a feedstream by volume, the Permittee must determine and record the density of the feedstream by sampling and analysis (unless the constituent concentration in units of weight per unit volume (e.g., mg/l) is reported); and
  - (3) Calculate and record the mass feedrate of the parameter per unit time.
- (b) In order to demonstrate compliance with the destruction and removal efficiency standard of Condition D.22.6 and the emission standards of Condition D.22.5(a) for dioxins and furans, the Permittee must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. The Permittee must document the temperature measurement location in the test plan. The limits must be established as minimum hourly rolling average limits as the average of the test run averages. [§63.1209(j)(1) and (k)(2)]
- (c) In order to demonstrate compliance with the destruction and removal efficiency standard of D.22.6 and the emission standards of D.22.5(a), (c), (d), (f) and (g) for dioxin and furans, semivolatile and low volatile metals, and hydrochloric acid and chlorine gas, the Permittee must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that the Permittee documents in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run. [63.1209(j)(2), (k)(3), (m)(2), (n)(5), and (o)(2)]
- (d) In order to demonstrate compliance with the destruction and removal efficiency standard of Condition D.22.6, the Permittee must specify operating parameters and limits to ensure that good operation of each hazardous waste firing system is maintained. [63.1209 (j)(4)]
- (e) In order to demonstrate compliance with the dioxin and furan, semivolatile metals and low volatile metals standards of Condition D.22.5(a), (c) and (d), and for combustors equipped with fabric filters, the Permittee must establish a limit on the maximum temperature of the gas at the inlet to the device on an hourly rolling average. The Permittee must establish the hourly rolling average limit as the average of the test run averages. [63.1209(k)(1) and (n)(1)]
- (f) In order to demonstrate compliance with the particulate matter and semivolatile and low volatile standards of Condition D.22.5(c), (d) and (g), the Permittee must install, calibrate, operate, and maintain a monitoring device equipped with a recorder to measure the values for each operating parameter selected in accordance with the requirements of paragraph §63.1209(m)(1)(iv)(A)(1) of this section. The Permittee must

install, calibrate, and maintain the monitoring equipment in accordance with the equipment manufacturer's specifications. The recorder must record the detector responses at least every 60 seconds. [63.1209 (m)(1)(iv)(4)(B) and (n)(3)]

- (g) In order to demonstrate compliance with the particulate matter standard of Condition D.22.5(g), the Permittee must establish a maximum ash feedrate limit as the average of the test run averages. [63.1209(m)(3)]
- (h) In order to demonstrate compliance with the hydrochloric acid and chlorine gas standard of Condition D.22.5(f) for combustors equipped with dry scrubbers, the Permittee must establish the following operating parameter limits:
  - (1) *Minimum sorbent feedrate.* The Permittee must establish a limit on minimum sorbent feedrate on an hourly rolling average as the average of the test run averages.
  - (2) *Minimum carrier fluid flowrate or nozzle pressure drop.* The Permittee must establish a limit on minimum carrier fluid (gas or liquid) flowrate or nozzle pressure drop based on manufacturer's specifications.
  - (3) *Sorbent specifications.* The Permittee must specify and use the brand (i.e., manufacturer) and type of sorbent used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless the Permittee documents in the site-specific performance test plan that affect adsorption and establish limits on those parameters based on the sorbent used in the performance test. [63.1209(o)(4)]
- (i) In order to demonstrate compliance with the D.22.9(a)(2), the Permittee must monitor the pressure instantaneously and the automatic waste feed cutoff system must be engaged when negative pressure is not maintained at any time.
- (j) The Permittee must use CMS (e.g., thermocouples, pressure transducers, flow meters) to document compliance with the applicable operating parameter limits under this condition.

#### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

##### **D.22.16 Visible Emissions Notations**

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- (a) Visible emission notations of the MPTS baghouse stack exhaust and the generator stack shall be performed once per shift during normal daylight operations when the MPTS is in operation. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take

response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

## **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19][40 CFR 263.1211]**

### D.22.17 Record Keeping Requirements

- (a) Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAQ.
- (b) To document compliance with Condition D.22.1, the Permittee shall maintain records of the hours of operation of the MPTS and the fuel usage by the generator.
- (c) To document compliance with the NESHAP, the Permittee shall maintain all records required by 40 CFR 63.1210 and 40 CFR 63.1211, including, but not limited to, the following:
  - (1) All information (including reports and notifications) required by this rule recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).
  - (2) All records as required by 40 CFR 63.10(b)(2) and (3) including:
    - (A) Documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.
    - (B) Records of applicability determination, including supporting analyses.
  - (3) All records of CEMS data required by 40 CFR 63.10(c).

### D.22.18 Reporting Requirements

- (a) The Permittee shall submit a semi-annual summary report which contains the information specified in 40 CFR 63.10(e)(3)(vi). If the total downtime for any CEMS or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee shall submit an excess emissions and CMS performance report along with the summary report.
- (b) To document compliance with the NESHAP 40 CFR 63, Subpart EEE, the Permittee shall report the information required by 40 CFR 63, Subpart EEE including, but not limited to the following:
  - (1) Compliance progress reports as required by 40 CFR 63.1211(b) and 40 CFR 63.10(d)(4).
  - (2) As required by 40 CFR 63.10(d)(2) and 40 CFR 63.1207(j) the Permittee shall report the results of performance tests as part of the notification of compliance status, required in Section C - NESHAP Notification and Reporting Requirements.
  - (3) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted

simultaneously with the excess emissions and continuous monitoring system performance reports.

- (4) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event within two (2) working days after commencing actions inconsistent with the plan, by telephone call to the OAQ Compliance Section at (317) 233-5674 or facsimile (FAX) transmission at (317) 233-6865. The immediate report shall be followed by a letter within seven (7) working days after the end of the event, certified by the Permittee, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.
- (5) Pursuant to 40 CFR 63.1206(c)(3)(vi), the Permittee shall report excessive exceedances.
- (6) Pursuant to 40 CFR 63.1206(c)(4)(iv), the Permittee shall report emergency safety vent openings.
- (c) In addition to being submitted to the address listed in Section C - General Reporting Requirements, all reports submitted pursuant to 40 CFR 60, Subpart A, or 40 CFR 63, Subpart A shall also be submitted to the U.S. EPA at the following address:

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

A "responsible official" as defined by 326 IAC 2-7-1(34), shall certify the reports.

#### D.22.19 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.22.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**OFFICE OF AIR QUALITY**  
**Compliance Branch**

**Part 70 Quarterly Report**

Source Name: Naval Surface Warfare Center, Crane Division  
Source Address: 300 Highway 361, Crane, Indiana 47522  
Mailing Address: Building 3260, Code 09510, 300 Highway 361, Crane, IN 47522  
Source Modification No.: 101-14772-00005  
Facility: Mobile Plasma Treatment System  
Parameter: Hours  
Limit: 1800 hours per consecutive twelve (12) month period

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance Branch**

**Part 70 Quarterly Report**

Source Name: Naval Surface Warfare Center, Crane Division  
Source Address: 300 Highway 361, Crane, Indiana 47522  
Mailing Address: Building 3260, Code 09510, 300 Highway 361, Crane, IN 47522  
Source Modification No: 101-14772-00005  
Facility: Generator for the Mobile Plasma Treatment System  
Parameter: Gallons of diesel fuel  
Limit: 89,604 gallons per consecutive twelve (12) month period

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This month	Previous 11 months	12 months total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## Indiana Department of Environmental Management Office of Air Quality

### Addendum to the Technical Support Document for a Part 70 Significant Source Modification and a Part 70 Significant Permit Modification

#### Source Background and Description

Source Name:	Naval Surface Warfare Center, Crane Division
Source Location:	300 Highway 361, Crane, Indiana 47522
County:	Martin
SIC Code:	9711, 3483
Operation Permit No.:	T 101-7341-00005
Operation Permit Issuance Date:	May 15, 2001
Significant Source Modification No.:	101-14772-00005
Significant Permit Modification No.:	101-14889-00005
Permit Reviewer:	ERG/MH

On April 3, 2002, the Office of Air Quality (OAQ) had a notice published in the Shoal News, Shoals, Indiana, stating that Naval Surface Warfare Center, Crane Division, had applied for a Part 70 Significant Source Modification and a Part 70 Significant Permit Modification to operate a Mobile Plasma Treatment System with various controls. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On May 3, 2002, Naval Surface Warfare Center, Crane Division, submitted comments on the proposed permit modification. The summary of the comments is as follows:

#### Comments 1 through 5 and 8 through 11:

These comments note several insignificant errors.

#### Response to Comments 1 through 5 and 8 through 11:

OAQ has made these corrections as noted in the source's comments and shown below. OAQ has also corrected the Table of Contents as noted by the source.

#### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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- (r) One (1) mobile plasma treatment system (MPTS), identified as P02, located near **Building 69 fire house 2**, with a maximum capacity of 3600 pounds per hour gross weight of explosives, 500 pounds per hour net explosive weight (NEW), equipped with one (1) afterburner for VOC and CO control, one (1) semi-dry scrubber for HCl and PM control, and one (1) Selective Catalytic Reduction (SCR) unit for NO<sub>x</sub> control and exhausting at stack S02. The semi-dry scrubber is composed of an evaporative cooler, sodium bicarbonate injection, and a pulse-jet baghouse.



- (s) One (1) ~~oil-diesel~~-fueled, 4160-volt, 1000 kW generator which powers the MPTS exhausting at stack S03.

**D.22.5 NESHAP Emissions Limitation [40 CFR 63.1203(b), Subpart EEE]**

The following emission limits apply:

- (b) Mercury emissions shall not exceed 45 micrograms per dry standard cubic meter corrected to seven percent oxygen.

**D.22.13 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1-3(i)(8)] [326 IAC 2-1.1-11]  
[40 CFR 63.1207, Subpart EEE]**

- (f) The Permittee must establish separate semivolatile metal, low volatile metal, mercury, and total chlorine (organic and inorganic), and/or ash ~~feedrate~~~~federate~~ limits for each feedstream for which the comprehensive performance test feedstream analysis determines that these constituents are not present at detectable levels.

**D.22.14 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-7-6(1),(6)] [40 CFR 63, Subpart A]**

- (c) The Permittee must install, calibrate, maintain, and operate a particulate matter CEMS to demonstrate and monitor compliance with the particulate matter standards under Condition D.22.5(g). However, compliance with the requirement to install, calibrate, maintain and operate the PM CEMS ~~in is~~ not required until such time that the EPA promulgates all performance specifications and operational requirements applicable to PM CEMS. [63.1209(a)(1)(iii)]

**D.22.15 Monitoring [40 CFR 63.1209]**

- (a) To comply with the applicable feedrate limits established in Condition D.22.8, the Permittee must monitor and record feedrates as follows:
- (2) Determine and record the mass or volume flowrate of each feedstream by a CMS. If the Permittee determines the flowrate of a feedstream by volume, the Permittee must determine and record the density of the feedstream by sampling and analysis (unless the constituent concentration in units of weight per unit volume (e.g., ~~m~~~~M~~mg/l) is reported); and

**Comment 6:**

Sections B and C should be updated to IDEM's model language from 1/23/02 to reflect the January 2002 rule (326 IAC 2) revisions.

**Response to Comment 6:**

The revisions were not made in the draft permit because they were not requested in the application. Because the Permittee pointed out that these revisions can be made, the OAQ has changed Sections B and C to incorporate the Article 2 rule revisions that were adopted on October 3, 2001, and become effective on January 19th, 2002. For more information about this rulemaking, refer to the October 2001 Air Pollution Control Board Packet which can be found on the Internet at <http://www.state.in.us/idem/air/rules/apcb/packets/index.html>.

**Response to Comment 6a:** In B.2, the new rule cite to B.2 Permit Term was added.

**B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]**

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

**Response to Comment 6b:** In B.12, Emergency Provisions (a)(b) and (g) have been revised to reflect rule changes to 326 IAC 2-7-16. This section of the rule is now consistent with 40 CFR 70.6(g) and provides an affirmative defense to an action brought for non-compliance with technology based emission limitations only.

**B.12 Emergency Provisions [326 IAC 2-7-16]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation; ~~except as provided in 326 IAC 2-7-16.~~
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a ~~health-based or~~ technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (g) ~~Operations may continue during an emergency only if the following conditions are met:~~
- (1) ~~—If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.~~
- (2) ~~—If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:~~
- (A) ~~—The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and~~
- (B) ~~—Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.~~

~~Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.~~

**Response to Comment 6c:** Condition B.14 Multiple Exceedances has been deleted, because 326 IAC 2-7-5(1)(E) has been repealed, because it conflicted with 40 CFR 70.6(a)(6).

**B.14 Multiple Exceedances [326 IAC 2-7-5(1)(E)]**

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~~Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.~~

**Response to Comment 6d:** Condition B.14 Prior Permits Superseded was added to the permit to help clarify the intent of the new rule 326 IAC 2-1.1-9.5.

**B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
- (1) incorporated as originally stated,

(2) revised, or

(3) deleted

by this permit.

(b) All previous registrations and permits are superseded by this permit.

**Response to Comment 6e:** In B.13, section (b) was removed from B.13 Permit Shield. Since B.14 Prior Permits Superseded has been added to the permit, it is not necessary for this statement to be in this condition.

B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

~~(b) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. All previously issued operating permits are superseded by this permit.~~

**Response to Comment 6f:** The IDEM, OAQ, has revised Condition B.15 Deviations from Permit Requirements and Conditions and certain Parametric Monitoring conditions in the D section of the permit to address concerns regarding the independent enforceability of permit conditions [see 40 CFR 70.6(a)(6)(i)]. The Parametric Monitoring conditions have been revised to establish normal operating conditions for the emission unit or control device and to require implementation of the compliance response plan when monitoring indicates operation is outside the normal range. Language in Conditions D.1.5, D.14.5, and D.21.8 that inferred that operating outside of the normal range could be considered by itself to be a deviation was removed. B.15 was revised to remove language that could be considered to grant exemptions from permit requirements and to clarify reporting obligations.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. ~~Deviations that are required to be reported by an applicable requirement~~ **A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit**, shall be reported according to the schedule stated in the applicable requirement and ~~do~~ **does** not need to be included in this report.

~~The notification by the Permittee~~ **Quarterly Deviation and Compliance Monitoring Report** does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit ~~or a rule. It does not include:~~

~~(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or~~

~~(2) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.~~

~~A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.~~

- (c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

#### D.1.5 Parametric Monitoring

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The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the abrasive blasting units, at least once per shift when the abrasive blasting units are in operation when venting to the atmosphere. ~~Unless operated under conditions for which the Compliance Response Plan specifies otherwise,~~ **When for any one reading, the pressure drop across the baghouse shall be maintained within is outside the normal range of 2.0 and 6.0 inches of water or a range established during the latest stack test.** ~~The, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports.~~ **for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan --Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.**

#### D.14.5 Parametric Monitoring

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The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the containment chamber in Building 142, at least once per shift when the abrasive blasting units are in operation and venting to the atmosphere. ~~Unless operated under conditions for which the Compliance Response Plan specifies otherwise,~~ **When for any one reading, the pressure drop across the baghouse shall be maintained within is outside the normal range of 2.0 and 6.0 inches of water or a range established during the latest stack test.** ~~The, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports.~~ **for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan --Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.**

#### D.21.8 Parametric Monitoring

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The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the contained detonation chamber, at least once per shift when the contained detonation chamber is in operation. ~~Unless operated under conditions for which the Compliance Response Plan specifies otherwise,~~ **When for any one reading, the pressure drop across the baghouse shall be maintained within is outside the normal range of 1.0 and 4.0 inches of water or a range established during the latest stack test.** ~~The, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports.~~ **for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C - Compliance Monitoring Response Plan - Failure to Take Response Steps Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.**

**Response to Comment 6g:** Part 70 requires any application form, report, or compliance certification to be certified by the Responsible Official. IDEM, OAQ has revised C.8 Asbestos Abatement Projects to clarify that the asbestos notification does not require a certification by the responsible official, but it does need to be certified by the owner or operator. IDEM, OAQ has revised C.18 Actions Related to

Noncompliance Demonstrated by a Stack Test; a certification by the responsible official is required for the notification sent in response to non-compliance with a stack test.

**C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

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- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

**The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project.** The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to

thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do ~~not~~ require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Response to Comment 6h:** The IDEM, OAQ has restructured C.17 to clarify the contents and implementation of the compliance response plan. The language regarding the OAQ's discretion to excuse failure to perform monitoring under certain conditions has been deleted. The OAQ retains this discretion to excuse minor incidents of missing data; however, it is not necessary to state criteria regarding the exercise of that discretion in the permit. In C.18 (c)(2) "administrative amendment" has been revised to "minor permit modification", because 326 IAC 2-7-11(a)(7) has been repealed. The title Compliance Monitoring Plan - Failure to Take Response Steps Preparation, Implementation, Records, and Reports throughout the permit.

C.17 Compliance Monitoring ~~Response Plan - Failure to Take Response Steps~~ **Preparation, Implementation, Records, and Reports** [326 IAC 2-7-5] [326 IAC 2-7-6]

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- (a) The Permittee is required to **prepare** ~~implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole of information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:~~
  - (1) ~~This condition;~~
  - (2) ~~The Compliance Determination Requirements in Section D of this permit;~~
  - (3) ~~The Compliance Monitoring Requirements in Section D of this permit;~~
  - (4) ~~The Record Keeping and Reporting Requirements in Section C (General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and~~

- ~~(5)~~ ~~A~~ **a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ.** The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, **supplemented from time to time by the Permittee**, and maintained on site, and is comprised of:
- ~~(A)~~**(1) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.**
- ~~(B)~~ ~~A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.~~
- (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.**
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition **as follows:** ~~Failure to take reasonable response steps may constitute a violation of the permit.~~
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or**
- (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.**
- (2) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.**
- (3) Failure to take reasonable response steps shall constitute a violation of the permit.**
- (c) ~~Upon investigation of a compliance monitoring excursion, the~~ **The** Permittee is ~~excused from taking~~ **not required to take any** further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.**

- (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for ~~an administrative amendment~~ **a minor permit modification** to the permit, and such request has not been denied.
- (3) An automatic measurement was taken when the process was not operating.
- (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) **When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.**
- ~~(d)(e)~~ Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. **The Permittee shall record all instances when response steps are taken.** In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- ~~(e)(f)~~ **Except as otherwise provided by a rule or provided specifically in Section D,** all monitoring ~~as~~ required in Section D shall be performed ~~at all times~~ **when the equipment emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.** ~~If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.~~
- (f) ~~At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.~~

**Comment 7:**

In Condition D.21.9, the second sentence regarding redirection of baghouse vents should be deleted, as approved previously, because this exhaust cannot be redirected inside the building.

**Response to Comment 7:**

This sentence has been deleted.

**D.21.9 Baghouse Inspections**

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An inspection shall be performed with the last month of each calendar quarter of all cartridges controlling the contained detonation chamber operation when venting to the atmosphere. ~~A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter.~~ All defective cartridges shall be replaced or repaired.

**Comment 12:**



For Condition D.22.18(a), there are no report forms at the end of the permit for the list of required information. Will forms be included? If not, please describe the format in which IDEM would like and list the information necessary for the form.

**Response to Comment 12:**

No special forms are required. Any clear presentation of the information identified in 40 CFR 63.10(e)(3)(vi) is acceptable. OAQ has not changed this condition.

**Comment 13:**

Conditions D.22.18 and D.22.19 should be combined into one since both are reporting requirements for the MPTS.

**Response to Comment 13:**

These conditions are based on two different requirements. Condition D.22.18 is based on the NESHAP 40 CFR 63, Subpart EEE. D.22.19 documents compliance with PSD requirements. Reports required by D.22.18 are submitted to both EPA and OAQ. Reports required by D.22.19 are submitted to OAQ only. Many permits have separate conditions for NESHAP reporting requirements and other reporting requirements. OAQ has not changed these conditions.

Upon further review, the OAQ has decided to make the following revision to the permit. Conditions D.22.14 and D.22.15 were moved into the Compliance Monitoring Requirements sections. No changes in the number of any conditions was necessary. The Table of Contents has also been modified to reflect this change.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

D.22.14 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-7-6(1),(6)] [40 CFR 63, Subpart A]

**~~Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]~~**

D.22.16 Visible Emissions Notations

**Comment 14:**

If there is a way to avoid having the source modification and permit modification sent as duplicate documents with all sections of the Title V permit, it would create less paper, less confusion and less review time for all the points of contact at Crane that have to review each permit and also for the public who review the permits at the library.

**Response to Comment 14:**

This Source Modification will include only the new D subsection. A Permit Modification is necessary to incorporate the source modification into the Title V permit. For the Permit Modification, the entire Title V permit is reprinted with all revisions included.

# **Indiana Department of Environmental Management Office of Air Quality**

## **Technical Support Document (TSD) for a Part 70 Significant Source Modification and a Part 70 Significant Permit Modification**

### **Source Background and Description**

Source Name:	Naval Surface Warfare Center, Crane Division
Source Location:	300 Highway 361, Crane, Indiana 47522
County:	Martin
SIC Code:	9711, 3483
Operation Permit No.:	T 101-7341-00005
Operation Permit Issuance Date:	May 15, 2001
Significant Source Modification No.:	101-14772-00005
Significant Permit Modification No.:	101-14889-00005
Permit Reviewer:	ERG/MH

The Office of Air Quality (OAQ) has reviewed a modification application from Naval Surface Warfare Center, Crane Division (NSWC Crane) relating to the construction and operation of the following emission units and pollution control devices:

- (r) One (1) mobile plasma treatment system (MPTS), identified as P02, located near Building 69, with a maximum capacity of 3600 pounds per hour gross weight of explosives, 500 pounds per hour net explosive weight (NEW), equipped with one (1) afterburner for VOC and CO control, one (1) semi-dry scrubber for HCl and PM control, and one (1) Selective Catalytic Reduction (SCR) unit for NO<sub>x</sub> control and exhausting at stack S02. The semi-dry scrubber is composed of an evaporative cooler, sodium bicarbonate injection, and a pulse-jet baghouse.
- (s) One (1) diesel-fueled, 4160-volt, 1000 kW generator which powers the MPTS exhausting at stack S03.

### **History**

On August 6, 2001, NSWC Crane submitted an application requesting to add an operation to destroy explosives. This operation is subject to the Hazardous Waste Combustor MACT standard. Because the recent addition of a Contained Detonation Chamber (CDC) (Significant Permit Modification 101-14789-00005, issued January 3, 2001) is similar in function (destruction of hazardous waste explosives) to the MPTS, the emissions from both units are combined for comparison with PSD significance levels. This modification also increases the input limit on the CDC from 1689 tons to 1700 tons per twelve (12) consecutive month period.

### **Enforcement Issue**

There are no enforcement actions pending.

### **Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S02	MPTS	40	0.67	2,336	450
S03	MPTS generator	20	0.67	6,400	850

### Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification and Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on August 9, 2001. Additional information was received on August 31, 2001, December 14, 2001, and February 13, 2002.

### Emission Calculations

See pages 1 and 2 of Appendix A of this document for detailed emissions calculations.

### Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

The values in the table reflects the PTE after the MPTS controls because emission factors before controls are not available. Therefore, the table shows uncontrolled PTE values as “greater than” these controlled emissions. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	greater than 2.93
PM-10	greater than 2.93
SO <sub>2</sub>	greater than 96.10
VOC	greater than 5.69
CO	greater than 14.17
NO <sub>x</sub>	greater than 123.65

HAP's	Potential To Emit (tons/year)
Hydrochloric Acid	0.07
TOTAL	less than 0.1

### Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This is a significant modification pursuant to 326 IAC 2-7-10.5(f)(4) because the new equipment

has a potential to emit NO<sub>x</sub> of more than 25 tons per year. The permit modification for approval to operate is being performed pursuant to 326 IAC 2-7-12(d).

### County Attainment Status

The source is located in Martin County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Martin County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Martin County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions  
 Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	greater than 250
PM-10	greater than 250
SO <sub>2</sub>	greater than 100, less than 250
VOC	greater than 250
CO	greater than 250
NO <sub>x</sub>	greater than 250

- (a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based on the TSD for T101-7341-00005 and TSD for the first Significant Permit Modification for this source, 101-14789-00005.

## Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment and permit limits are considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
MPTS with generator	0.60	0.60	19.75	1.17	2.91	25.41	less than 0.1
Contained Detonation Chamber (CDC)*	0.51	0.51	0.08	0.18	96.56	14.45	less than 0.1
Total	1.11	1.11	19.83	1.35	99.47	39.86	less than 0.1
PSD Significant Increase Threshold	25	15	40	40	100	40	--

\*The CDC has already been permitted as Significant Permit Modification 101-14889-00005.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Emissions of CO and NO<sub>x</sub> are limited to 99.47 and 39.86 tons per year, respectively, by the 1800-hour per year limit on the MPTS and the limit on the CDC of 1700 tons of net explosive weight per year. Operation of the MPTS is limited on the basis of hours rather than on the quantity of waste input because emissions are generated primarily by the plasma arc, regardless of the material being treated. Emissions from the plasma arc are directly related to the duration of its operation. Generator emissions are limited by the annual fuel limit of 89,604 gallons. This quantity is the amount combusted in 1800 hours of operation at 65 percent load. Over its potential operating range in this service, the generator emits CO and NO<sub>x</sub> in direct proportion of the amount combusted.

The MPTS can be transported, but operation at other sites is not proposed. This permit is valid on the NSWC Crane site only.

## Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification. The NSPS for Commercial and Industrial Solid Waste Incineration (CISWI) Units (40 CFR Subpart CCC) does not apply to this modification because plasma treatment is not a controlled flame combustion as specified in the definition of CISWI in 40 CFR 60.2265.
- (b) The MPTS is subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR 60.1200), Subpart EEE, Hazardous Waste Combustors, because the definition of an incinerator of hazardous waste in 40 CFR 260.10 includes "plasma arc incinerator." This NESHAP does not apply to the CDC which does not meet the "controlled flame combustion" definition of incineration.

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart EEE.

Emission Limitations and Standards

- (a) The following emission limits apply pursuant to 63.1203(b):
- (1) Dioxin/Furan emissions shall not exceed 0.20 nanograms toxicity equivalent (TEQ) per dry standard cubic meter corrected to seven percent oxygen.
  - (2) Mercury emissions shall not exceed 45 microgram per dry standard cubic meter corrected to seven percent oxygen.
  - (3) Lead and cadmium combined emissions shall not exceed 120 micrograms per dry standard cubic meter corrected to seven percent oxygen.
  - (4) Arsenic, beryllium, and chromium combined emissions shall not exceed 97 micrograms per dry standard cubic meter corrected to seven percent oxygen.
  - (5) Carbon monoxide and hydrocarbon emissions shall comply with either (A) or (B) below:
    - (A) Hydrocarbons in the main stack shall not exceed 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to seven percent oxygen, and reported as propane; or
    - (B) Carbon monoxide in the main stack shall not exceed 100 parts per million by volume, over an hourly rolling average monitored continuously with a continuous emissions monitoring system (CEMS), dry basis and corrected to seven percent oxygen; and in addition, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by 40 CFR 63.1206(b)(7), hydrocarbons shall not exceed 10 parts per million by volume over an hourly rolling average (monitoring continuously with a CEMS), dry basis, corrected to seven percent oxygen, and reported as propane.
  - (6) Hydrochloric acid and chlorine gas combined emissions shall not exceed 21 parts per million by volume, expressed as hydrochloric acid equivalents, dry basis, corrected to seven percent oxygen.
  - (7) Particulate matter (PM) emissions shall not exceed 34 milligrams per dry standard cubic meter.
  - (8) When hazardous waste is not in the plasma chamber and the Permittee has documented in the operating record that the source is complying with all other applicable requirements of this permit, 40 CFR Subpart EEE shall not apply except for the notification, reporting, and record requirements of sections 63.1203 through 63.1205; the monitoring and compliance standards of this section and sections 63.1207 through 63.1209, except the modes of operation requirements of section 63.1209(q); and the notification, reporting, and recordkeeping requirements of sections 63.1210 through 63.1212.
- (b) The Permittee shall specify one or more principle organic hazardous constituents (POHCs) from the list of HAPs for each waste to be burned based on the degree of difficulty of treating that constituent and on its concentration or mass in the feed. The

Permittee shall achieve a destruction and removal efficiency (DRE) of 99.99% for each POHC. DRE shall be calculated using the equation:

$$DRE = [1 - W_{out}/W_{in}] \times 100\%$$

Where:

$W_{in}$  = mass feedrate of one POHC in a waste feedstream; and

$W_{out}$  = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere

- (c) The Permittee shall operate the MPTS with a functioning system that immediately and automatically cuts off the hazardous waste feed, except during a ramp down procedure under the following conditions:
- (d) In order to demonstrate compliance with the destruction and removal efficiency and the emission standards in paragraph (a) the Permittee must establish limits on the maximum pumpable and total (i.e., pumpable and nonpumpable) hazardous waste feedrate for each location where hazardous waste is fed. These limits must be established as the average of the maximum hourly rolling averages for each run. The Permittee must also establish a 12-hour rolling average limit for the feedrate of mercury, semivolatile and low volatile metals, chlorine and chlorides. [63.1209(j)(3), (k)(4), (l)(1), (n)(2), (o)(1)]
- (e) The Permittee shall control plasma chamber leaks by:
  - (1) keeping the combustion zone sealed, or
  - (2) maintaining the maximum combustion zone pressure lower than ambient pressure using an instantaneous monitor.
- (f) The Permittee shall establish training programs for all categories of personnel whose activities may reasonably be expected to directly affect emissions.
  - (1) The Permittee shall ensure that the MPTS is operated and maintained at all times by persons who are trained and certified to perform these duties.
  - (2) A certified control room operator must be on duty at the site at all times the source is in operation.
  - (3) To maintain control room operator qualification under a site-specific, source developed and implemented training program as provided by paragraph §63.1206(c)(6)(v), control room operators must complete an annual review or refresher course.
  - (4) The Permittee shall record the operator training and certification program in the operating record.
- (g) The Permittee must prepare and at all times operate according to an operation and maintenance plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the MPTS, including associated pollution control equipment, that could affect emissions of regulated hazardous air pollutants.
- (h) The Permittee must continuously operate a bag leak detection system.

#### Compliance Determination Requirements

- (a) No later than six months after the MPTS begins operation, the Permittee shall demonstrate initial compliance with the emission limits by commencing initial comprehensive performance tests in accordance with 40 CFR 63.1207 and Section C - Performance Testing. These tests shall also establish limits for the operating parameters as provided in 40 CFR 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems (CMS). The testing must be completed within 60 days after the date of commencement. Comprehensive performance tests shall be repeated at least once every 61 months from the date of the most recent valid compliance demonstration. Based on the results of previous stack tests, IDEM may, at its discretion, allow the Permittee to skip one test cycle.
- (b) The Permittee shall commence confirmatory performance testing no later than 31 months after the date of commencing the previous comprehensive performance test. The testing must be completed within 60 days after the date of commencement.
- (c) The Permittee must establish separate semivolatile metal, low volatile metal, mercury, and total chlorine (organic and inorganic), and/or ash feedrate limits for each feedstream for which the comprehensive performance test feedstream analysis determines that these constituents are not present at detectable levels.
- (d) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2 and 40 CFR 63, Subpart EEE, a CEMS shall be installed, calibrated, maintained, and continuously operated pursuant to 326 IAC 3-5. The CEMS shall be installed and operational prior to conducting the performance tests. The CEMS shall meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 63.8(c).
- (e) Pursuant to 40 CFR 63, Subpart EEE, a CEMS shall be installed, calibrated, maintained, and operated to demonstrate compliance with the carbon monoxide and hydrocarbon limits. An oxygen CEMS shall also be installed, calibrated, maintained, and operated to continuously correct the carbon monoxide and hydrocarbon levels to 7 percent oxygen. [63.1209(a)(1)(i)]
- (f) The Permittee must install, calibrate, maintain, and operate a particulate matter CEMS to demonstrate and monitor compliance with the particulate matter standards. However, compliance with the requirement to install, calibrate, maintain and operate the PM CEMS is not required until such time that the EPA promulgates all performance specifications and operational requirements applicable to PM CEMS. [63.1209(a)(1)(iii)]
- (g) To comply with the applicable feedrate limits, the Permittee must monitor and record feedrates as follows:
  - (1) Determine and record the value of the parameter for each feedstream by sampling and analysis or other method;
  - (2) Determine and record the mass or volume flowrate of each feedstream by a CMS. If the Permittee determines the flowrate of a feedstream by volume, the Permittee must determine and record the density of the feedstream by sampling and analysis (unless the constituent concentration in units of weight per unit volume (e.g., mg/l) is reported); and
  - (3) Calculate and record the mass feedrate of the parameter per unit time.
- (h) In order to demonstrate compliance with the destruction and removal efficiency standard and the emission standards for dioxins and furans, the Permittee must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone.



- (i) In order to demonstrate compliance with the destruction and removal efficiency standard and the emission standards for dioxin and furans, semivolatile and low volatile metals, and hydrochloric acid and chlorine gas, the Permittee must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that the Permittee documents in the site-specific test plan as an appropriate surrogate for gas residence time.
- (j) In order to demonstrate compliance with the destruction and removal efficiency standard, the Permittee must specify operating parameters and limits to ensure that good operation of each hazardous waste firing system is maintained. [63.1209 (j)(4)]
- (k) In order to demonstrate compliance with the dioxin and furan, semivolatile metals and low volatile metals standards, and for combustors equipped with fabric filters, the Permittee must establish a limit on the maximum temperature of the gas at the inlet to the device on an hourly rolling average.
- (l) In order to demonstrate compliance with the particulate matter and semivolatile and low volatile standards, the Permittee must install, calibrate, operate, and maintain a monitoring device equipped with a recorder to measure the values for each operating parameter selected in accordance with the requirements of paragraph §63.1209(m)(1)(iv)(A)(1).
- (m) In order to demonstrate compliance with the particulate matter standard, the Permittee must establish a maximum ash feedrate limit as the average of the test run averages.
- (n) In order to demonstrate compliance with the hydrochloric acid and chlorine gas standard for combustors equipped with dry scrubbers, the Permittee must establish the following operating parameter limits:
  - (1) *Minimum sorbent feedrate.* The Permittee must establish a limit on minimum sorbent feedrate on an hourly rolling average as the average of the test run averages.
  - (2) *Minimum carrier fluid flowrate or nozzle pressure drop.* The Permittee must establish a limit on minimum carrier fluid (gas or liquid) flowrate or nozzle pressure drop based on manufacturer's specifications.
  - (3) *Sorbent specifications.* The Permittee must specify and use the brand (i.e., manufacturer) and type of sorbent used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless the Permittee documents in the site-specific performance test plan that affect adsorption and establish limits on those parameters based on the sorbent used in the performance test. [63.1209(o)(4)]
- (o) In order to demonstrate compliance with the plasma chamber leaks condition, the Permittee must monitor the pressure instantaneously and the automatic waste feed cutoff system must be engaged when negative pressure is not maintained at any time.
- (p) The Permittee must use CMS (e.g., thermocouples, pressure transducers, flow meters) to document compliance with the applicable operating parameter limits.

#### Record Keeping and Reporting Requirement

- (a) To document compliance with the NESHAP, the Permittee shall maintain all records required by 40 CFR 63.1210 and 40 CFR 63.1211, including, but not limited to, the following:

- (1) All information (including reports and notifications) required by this rule recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).
  - (2) All records as required by 40 CFR 63.10(b)(2) and (3) including:
    - (A) Documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.
    - (B) Records of applicability determination, including supporting analyses.
  - (3) All records of CEMS data required by 40 CFR 63.10(c).
- (b) The Permittee shall submit a semi-annual summary report which contains the information specified in 40 CFR 63.10(e)(3)(vi). If the total downtime for any CEMS or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee shall submit an excess emissions and CMS performance report along with the summary report.
- (c) To document compliance with the NESHAP 40 CFR 63, Subpart EEE, the Permittee shall report the information required by 40 CFR 63, Subpart EEE including, but not limited to the following:
- (1) Compliance progress reports as required by 40 CFR 63.1211(b) and 40 CFR 63.10(d)(4).
  - (2) As required by 40 CFR 63.10(d)(2) and 40 CFR 63.1207(j) the Permittee shall report the results of performance tests as part of the notification of compliance status, required in Section C - NESHAP Notification and Reporting Requirements.
  - (3) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.
  - (4) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event.
  - (5) Pursuant to 40 CFR 63.1206(c)(3)(vi), the Permittee shall report excessive exceedances.
  - (6) Pursuant to 40 CFR 63.1206(c)(4)(iv), the Permittee shall report emergency safety vent openings.
- (d) In addition to being submitted to the address listed in Section C - General Reporting Requirements, all reports submitted pursuant to 40 CFR 60, Subpart A, or 40 CFR 63, Subpart A shall also be submitted to the U.S. EPA.

A "responsible official" as defined by 326 IAC 2-7-1(34), shall certify the reports.

#### **State Rule Applicability - Individual Facilities**

#### 326 IAC 4-2 (Incinerators)

The MPTS is subject to 326 IAC 4-2 (Incinerators) because it meets the definition of incinerator, "an engineered apparatus that burns waste substances with controls on combustion factors..." contained in 326 IAC 1-2-34. Pursuant to this rule, the MPTS shall:

- (a) Comply with 326 IAC 5-1 (Opacity Limitations) and 326 IAC 2 (Permit Review Rules).
- (b) Be maintained properly as specified by the manufacturer and approved by the commissioner; and
- (c) Emit less than three-tenths (0.3) pounds of particulate matter per thousand (1,000) pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air.

#### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### 326 IAC 6-3-2 (Process Operations)

This rule does not apply because the MPTS is considered to be an incinerator.

#### 326 IAC 9-1-2(3) (Refuse Incineration and Burning Equipment)

Pursuant to 326 IAC 9-1-2(3) (Refuse Incineration and Burning Equipment), the MPTS shall not discharge carbon monoxide unless the exhaust from the plasma chamber is burned in a direct-flame afterburner or controlled in other means approved by the commissioner.

#### 326 IAC 20-28 (Hazardous Waste Combustors)

This rule incorporates the Federal Hazardous Waste Combustor NESHAP (40 CFR 63.1200, Subpart EEE), with the exception of 63.1210(b) (Notification of Compliance) and 63.1210(c) (Documentation of Compliance).

### Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will

arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The MPTS has applicable compliance monitoring conditions as specified below:

Daily visible emissions notations of the MPTS shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

These monitoring conditions are necessary because the baghouse for the MPTS must operate properly to ensure compliance with 326 IAC 2-7 (Part 70).

## Proposed Changes

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a military base where ammunition, rockets and other military ordnance are manufactured, stored and disposed.

- (r) **One (1) mobile plasma treatment system (MPTS), identified as P02, located near Building 69, with a maximum capacity of 3600 pounds per hour gross weight of explosives, 500 pounds per hour net explosive weight (NEW), equipped with one (1) afterburner for VOC and CO control, one (1) semi-dry scrubber for HCl and PM control, and one (1) Selective Catalytic Reduction (SCR) unit for NO<sub>x</sub> control and exhausting at stack S02. The semi-dry scrubber is composed of an evaporative cooler, sodium bicarbonate injection, and a pulse-jet baghouse.**
- (s) **One (1) diesel-fueled, 4160-volt, 1000 kW generator which powers the MPTS exhausting at stack S03.**

### D.21.1 PSD Minor Net Emission Increase Limit [326 IAC 2-2][40 CFR 52.21]

This input to the CDC shall not exceed **1,700** tons of net explosive weight per consecutive twelve (12) month period. This throughput limit is required to limit the potential to emit of carbon monoxide (CO) to **96.56 tons per year and the NO<sub>x</sub> emissions to less than 14.45 tons per year** consecutive twelve (12) month period. **These limits, together with the limits on the Mobile Plasma Treatment System (MPTS) in Condition D.22.1 are required to limit the potential of to emit of CO and NO<sub>x</sub> to less than 100 tons and 40 tons, respectively, per twelve (12) consecutive month period.** This limit will also limit the potential to emit of PM and PM10 to less than twenty five (25) and fifteen (15) tons per consecutive twelve (12) month period, respectively. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

## SECTION D.22

## FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(15)]:**

- (r) One (1) mobile plasma treatment system (MPTS), identified as P02, located near Building 69, with a maximum capacity of 3600 pounds per hour gross weight of explosives, 500 pounds per hour net explosive weight (NEW), equipped with one (1) afterburner for VOC and CO control, one (1) semi-dry scrubber for HCl and PM control, and one (1) Selective Catalytic Reduction (SCR) unit for NO<sub>x</sub> control and exhausting at stack S02. The semi-dry scrubber is composed of an evaporative cooler, sodium bicarbonate injection, and a pulse-jet baghouse.
- (s) One (1) diesel-fueled, 4160-volt, 1000 kW generator which powers the MPTS exhausting at stack S03.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.22.1 PSD Minor Net Emission Increase Limit [326 IAC 2-2][40 CFR 52.21]**

The MPTS shall be limited to 1800 hours per year and the total amount of diesel fuel used in the generator engine shall be limited to 89,604 gallons per twelve (12) consecutive month period. This will limit the NO<sub>x</sub> emissions from the MPTS (with generator) to less than 25.41 tons per year and the CO emissions to less than 2.91 tons per year. These limits, together with the limits on the CDC in Condition D.21.1, are required to limit the potential to emit of NO<sub>x</sub> and CO to less than 40 tons and 100 tons, respectively, per twelve (12) consecutive month period. Compliance with these limits makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

**D.22.2 RCRA Air Standards and Limitations**

The Permittee shall comply with all self-implementing provisions of any future air regulations promulgated under the provisions of Section 30004(n) of RCRA, as amended by HSWA.

**D.22.3 Incinerator Requirements [326 IAC 4-2]**

Pursuant to 326 IAC 4-2, the incinerator shall:

- (a) Consist of primary and secondary chambers or the equivalent;
- (b) Be equipped with a primary burner unless burning wood products;
- (c) Comply with 326 IAC 5-1 and 326 IAC 2;
- (d) Be maintained properly as specified by the manufacturer and approved by the commissioner;
- (e) Be operated according to the manufacturer's recommendations and only burn waste approved by the commissioner;
- (f) Comply with other state and/or local rules or ordinances regarding installation and operation of incinerators;

- (g) Be operated so that emissions of hazardous material including but not limited to viable pathogenic bacteria, dangerous chemicals or gases, or noxious odors are prevented;
- (h) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas at standard condition corrected to fifty percent (50%) excess air; and
- (i) Not create a nuisance or fire hazard.

If any of the above result, the burning shall be terminated immediately.

**D.22.4 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR 63, Subpart A]**

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the MPTS as described in this section except when otherwise specified in 40 CFR 63, Subpart EEE.

**D.22.5 NESHAP Emissions Limitation [40 CFR 63.1203(b), Subpart EEE]**

The following emission limits apply:

- (a) Dioxin/Furan emissions shall not exceed 0.20 nanograms toxicity equivalent (TEQ) per dry standard cubic meter corrected to seven percent oxygen.
- (b) Mercury emissions shall not exceed 45 microgram per dry standard cubic meter corrected to seven percent oxygen.
- (c) Lead and cadmium combined emissions shall not exceed 120 micrograms per dry standard cubic meter corrected to seven percent oxygen.
- (d) Arsenic, beryllium, and chromium combined emissions shall not exceed 97 micrograms per dry standard cubic meter corrected to seven percent oxygen.
- (e) Carbon monoxide and hydrocarbon emissions shall comply with either (1) or (2) below:
  - (1) Hydrocarbons in the main stack shall not exceed 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to seven percent oxygen, and reported as propane; or
  - (2) Carbon monoxide in the main stack shall not exceed 100 parts per million by volume, over an hourly rolling average monitored continuously with a continuous emissions monitoring system (CEMS), dry basis and corrected to seven percent oxygen; and in addition, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by 40 CFR 63.1206(b)(7), hydrocarbons shall not exceed 10 parts per million by volume over an hourly rolling average (monitored continuously with a CEMS), dry basis, corrected to seven percent oxygen, and reported as propane.
- (f) Hydrochloric acid and chlorine gas combined emissions shall not exceed 21 parts per million by volume, expressed as hydrochloric acid equivalents, dry basis, corrected to seven percent oxygen.

- (g) **Particulate matter (PM) emissions shall not exceed 34 milligrams per dry standard cubic meter. Compliance with this limit will also satisfy the requirements of 326 IAC 6-3-2 (Process Operations).**
- (h) **When hazardous waste is not in the plasma chamber and the Permittee has documented in the operating record that the source is complying with all other applicable requirements of this permit, 40 CFR Subpart EEE shall not apply except for the notification, reporting, and record requirements of sections 63.1203 through 63.1205; the monitoring and compliance standards of this section and sections 63.1207 through 63.1209, except the modes of operation requirements of section 63.1209(q); and the notification, reporting, and recordkeeping requirements of sections 63.1210 through 63.1212.**

**D.22.6 Destruction and Removal Efficiency Standard [40 CFR 63.1203(c), Subpart EEE]**

- (a) **The Permittee shall specify one or more principle organic hazardous constituents (POHCs) from the list of HAPs for each waste to be burned based on the degree of difficulty of treating that constituent and on its concentration or mass in the feed.**
- (b) **The Permittee shall achieve a destruction and removal efficiency (DRE) of 99.99% for each POHC. DRE shall be calculated using the equation:**

$$\text{DRE} = [1 - W_{\text{out}}/W_{\text{in}}] \times 100\%$$

**Where:**

**$W_{\text{in}}$  = mass feedrate of one POHC in a waste feedstream; and**

**$W_{\text{out}}$  = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere**

**D.22.7 Automatic Waste Feed Cutoff (AWFCO) [40 CFR 63.1206(c)(3), Subpart EEE]**

**The Permittee shall operate the MPTS with a functioning system that immediately and automatically cuts off the hazardous waste feed, except during a ramp down procedure under the following conditions:**

- (a) **When any of the following are exceeded:**
  - (1) **Operating parameter limits specified under Condition D.22.14.**
  - (2) **an emission standard monitored by a CEMS, or**
  - (3) **the allowable plasma chamber pressure.**
- (b) **When the span value of any CMS detector, except a CEMS, is met or exceeded;**
- (c) **Upon malfunction of a CMS monitoring an operating parameter limit specified under Condition D.22.14 or an emission level; or**
- (d) **When any component of the automatic waste feed cutoff system fails.**

**D.22.8 Establishing Feedrate Limits [40 CFR 63.1209]**

- (a) **In order to demonstrate compliance with the destruction and removal efficiency of Condition D.22.6 and the standards of Condition D.22.5, the Permittee must establish limits on the maximum pumpable and total (i.e., pumpable and nonpumpable) hazardous waste feedrate for each location where hazardous waste is fed. These limits must be established as the average of the maximum hourly**

rolling averages for each run. The Permittee must also establish a 12-hour rolling average limit for the feedrate of mercury, semivolatile and low volatile metals, chlorine and chlorides. [63.1209(j)(3), (k)(4), (l)(1), (n)(2), (o)(1)]

- (b) Prior to feeding the material, the Permittee must obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits.
  - (1) The Permittee must develop and implement a feedstream analysis plan and record it in the operating record. The plan must specify the parameters for which the Permittee will analyze each feedstream to ensure compliance with the operating parameter limits.
  - (2) The Permittee must submit the feedstream analysis plan to IDEM, OAQ for review and approval, if requested [63.1209(c)]

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**D.22.9 Plasma Chamber Leaks [40 CFR 63.1206(c)(5), Subpart EEE]**

- (a) The Permittee shall control plasma chamber leaks by:
  - (1) keeping the combustion zone sealed, or
  - (2) maintaining the maximum combustion zone pressure lower than ambient pressure using an instantaneous monitor.
- (b) The leak control method must be specified in the operating record.

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**D.22.10 Operator Training and Certification [40 CFR 63.1206(c)(6), Subpart EEE]**

- (a) The Permittee shall establish training programs for all categories of personnel whose activities may reasonably be expected to directly affect emissions.
  - (1) The Permittee shall ensure that the MPTS is operated and maintained at all times by persons who are trained and certified to perform these duties.
  - (2) A certified control room operator must be on duty at the site at all times the source is in operation. A hazardous waste incinerator control room operator must:
    - (A) Be trained and certified under a site-specific, source-developed and implemented program that meets the requirements of paragraph §63.1206(c)(6)(v); or
    - (B) Be trained under the requirements of, and certified under, the American Society of Mechanical Engineers Standard Number QHO-1-1994 and QHO-la-1996 Addenda; or
    - (C) Be trained and certified under a state program.
  - (3) To maintain control room operator qualification under a site-specific, source developed and implemented training program as provided by paragraph §63.1206(c)(6)(v), control room operators must complete an annual review or refresher course.
  - (4) The Permittee shall record the operator training and certification program in the operating record.



**D.22.11 Operation and Maintenance Plan [326 IAC 2-7-5(13)][40 CFR 63.1206(c)(7), Subpart EEE]**

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- (a) The Permittee must prepare and at all times operate according to an operation and maintenance plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the MPTS, including associated pollution control equipment, that could affect emissions of regulated hazardous air pollutants.
- (b) The plan must prescribe how the MPTS will be operated and maintained in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test.
- (c) This plan ensures compliance with the operation and maintenance requirements of §63.6(e) and minimizes emissions of pollutants, automatic waste feed cutoffs, and malfunctions.
- (d) The operating and maintenance plan must include a corrective measures plan that specifies the procedures the Permittee will follow in the case of a bag leak detection system alarm. The corrective measures plan must include, at a minimum, the procedures used to determine and record the time and cause of the alarm as well as the corrective measures taken to correct the control device malfunction or minimize emissions as specified below. Failure to initiate the corrective measures required by this paragraph is failure to ensure compliance with the emission standards.
- (e) The Permittee must record the plan in the operating record.

**D.22.12 Broken or Failed Bag Detection [40CFR 63.1206(c) (7)(ii)(D)]**

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The Permittee must continuously operate a bag leak detection system that meets the specifications and requirements below and must comply with the corrective measures requirements of paragraph §63.1206(c)(7)(ii)(B):

- (a) The bag leak detection system must be certified by the manufacturer to be capable of continuously detecting and recording particulate matter emissions at concentrations of 1.0 milligram per actual cubic meter, unless it is demonstrated, pursuant to §63.1209(a)(1), that a higher sensitivity would adequately detect bag leaks;
- (b) The bag leak detection system sensor must provide output of relative particulate matter loadings;
- (c) The bag leak detection system must be equipped with an alarm system that will sound an audible alarm when an increase in relative particulate loadings is detected over a preset level;
- (d) The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system;
- (e) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time;

- (f) **Following initial adjustment, the Permittee must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except where detailed in the Operation and Maintenance Plan. The Permittee must not increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition;**
- (g) **For negative pressure or induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector shall be installed downstream of the baghouse and upstream of any wet acid gas scrubber; and**
- (h) **Where multiple detectors are required, the system's instrumentation and alarm system may be shared among the detectors.**

#### **Compliance Determination Requirements**

##### **D.22.13 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1-3(i)(8)] [326 IAC 2-1.1-11] [40 CFR 63.1207, Subpart EEE]**

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- (a) **No later than six months after the MPTS begins operation, the Permittee shall demonstrate initial compliance with the emission limits established in Condition D.22.5 by commencing initial comprehensive performance tests in accordance with 40 CFR 63.1207 and Section C - Performance Testing. These tests shall also establish limits for the operating parameters as provided in 40 CFR 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems (CMS). The testing must be completed within 60 days after the date of commencement. Comprehensive performance tests shall be repeated at least once every 61 months from the date of the most recent valid compliance demonstration. Based on the results of previous stack tests, IDEM may, at its discretion, allow the Permittee to skip one test cycle.**
- (b) **The Permittee shall commence confirmatory performance testing no later than 31 months after the date of commencing the previous comprehensive performance test. The testing must be completed within 60 days after the date of commencement. Confirmatory performance tests are conducted to:**
  - (1) **Demonstrate compliance with the dioxin/furan emission standard when the source operates under normal operating conditions; and**
  - (2) **Conduct a performance evaluation of continuous monitoring systems required for compliance assurance with the dioxin/furan emission standard under §63.1209(k).**
- (c) **Pursuant to 326 IAC 3-6-3(b)(2), 40 CFR 63.7(e) and 40 CFR 63.1207(g), the tests shall be conducted under representative operating conditions.**
- (d) **Pursuant to 326 IAC 3-6-3(b), during the performance tests, the MPTS must be operating at 95 percent of its maximum production capacity or more, or under other capacities or conditions specified and approved by IDEM, to be considered a valid test.**
- (e) **The Permittee shall submit a site-specific test plan meeting the requirements of 40 CFR 63.1207(f) to the IDEM, OAQ at least:**

- (1) one year before a comprehensive performance test, and
  - (2) at least 60 days before a confirmatory performance test.
- (f) The Permittee must establish separate semivolatile metal, low volatile metal, mercury, and total chlorine (organic and inorganic), and/or ash federate limits for each feedstream for which the comprehensive performance test feedstream analysis determines that these constituents are not present at detectable levels.
- (g) Testing shall be conducted in accordance with Section C - Performance Testing.

**D.22.14 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-7-6(1),(6)] [40 CFR 63, Subpart A]**

---

- (a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2 and 40 CFR 63, Subpart EEE, a CEMS shall be installed, calibrated, maintained, and continuously operated pursuant to 326 IAC 3-5. The CEMS shall be installed and operational prior to conducting the performance tests required in Condition D.22.13. The CEMS shall meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 63.8(c).
- (b) Pursuant to 40 CFR 63, Subpart EEE, a CEMS shall be installed, calibrated, maintained, and operated to demonstrate compliance with the carbon monoxide and hydrocarbon limits specified in 40 CFR 63 and Condition D.22.5. An oxygen CEMS shall also be installed, calibrated, maintained, and operated to continuously correct the carbon monoxide and hydrocarbon levels to 7 percent oxygen. [63.1209(a)(1)(i)]
- (c) The Permittee must install, calibrate, maintain, and operate a particulate matter CEMS to demonstrate and monitor compliance with the particulate matter standards under Condition D.22.5(g). However, compliance with the requirement to install, calibrate, maintain and operate the PM CEMS in not required until such time that the EPA promulgates all performance specifications and operational requirements applicable to PM CEMS. [63.1209(a)(1)(iii)]

**D.22.15 Monitoring [40 CFR 63.1209]**

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- (a) To comply with the applicable feedrate limits established in Condition D.22.8, the Permittee must monitor and record feedrates as follows:
  - (1) Determine and record the value of the parameter for each feedstream by sampling and analysis or other method;
  - (2) Determine and record the mass or volume flowrate of each feedstream by a CMS. If the Permittee determines the flowrate of a feedstream by volume, the Permittee must determine and record the density of the feedstream by sampling and analysis (unless the constituent concentration in units of weight per unit volume (e.g.,m Mg/l) is reported); and
  - (3) Calculate and record the mass feedrate of the parameter per unit time.
- (b) In order to demonstrate compliance with the destruction and removal efficiency standard of Condition D.22.6 and the emission standards of Condition D.22.5(a) for dioxins and furans, the Permittee must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. The Permittee must document the temperature measurement location in the test plan. The limits must be

established as minimum hourly rolling average limits as the average of the test run averages. [§63.1209(j)(1) and (k)(2)]

- (c) In order to demonstrate compliance with the destruction and removal efficiency standard of D.22.6 and the emission standards of D.22.5(a), (c), (d), (f) and (g) for dioxin and furans, semivolatile and low volatile metals, and hydrochloric acid and chlorine gas, the Permittee must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that the Permittee documents in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run. [63.1209(j)(2), (k)(3), (m)(2), (n)(5), and (o)(2)]
- (d) In order to demonstrate compliance with the destruction and removal efficiency standard of Condition D.22.6, the Permittee must specify operating parameters and limits to ensure that good operation of each hazardous waste firing system is maintained. [63.1209 (j)(4)]
- (e) In order to demonstrate compliance with the dioxin and furan, semivolatile metals and low volatile metals standards of Condition D.22.5(a), (c) and (d), and for combustors equipped with fabric filters, the Permittee must establish a limit on the maximum temperature of the gas at the inlet to the device on an hourly rolling average. The Permittee must establish the hourly rolling average limit as the average of the test run averages. [63.1209(k)(1) and (n)(1)]
- (f) In order to demonstrate compliance with the particulate matter and semivolatile and low volatile standards of Condition D.22.5(c), (d) and (g), the Permittee must install, calibrate, operate, and maintain a monitoring device equipped with a recorder to measure the values for each operating parameter selected in accordance with the requirements of paragraph §63.1209(m)(1)(iv)(A)(1) of this section. The Permittee must install, calibrate, and maintain the monitoring equipment in accordance with the equipment manufacturer's specifications. The recorder must record the detector responses at least every 60 seconds. [63.1209 (m)(1)(iv)(4)(B) and (n)(3)]
- (g) In order to demonstrate compliance with the particulate matter standard of Condition D.22.5(g), the Permittee must establish a maximum ash feedrate limit as the average of the test run averages. [63.1209(m)(3)]
- (h) In order to demonstrate compliance with the hydrochloric acid and chlorine gas standard of Condition D.22.5(f) for combustors equipped with dry scrubbers, the Permittee must establish the following operating parameter limits:
  - (1) **Minimum sorbent feedrate.** The Permittee must establish a limit on minimum sorbent feedrate on an hourly rolling average as the average of the test run averages.
  - (2) **Minimum carrier fluid flowrate or nozzle pressure drop.** The Permittee must establish a limit on minimum carrier fluid (gas or liquid) flowrate or nozzle pressure drop based on manufacturer's specifications.
  - (3) **Sorbent specifications.** The Permittee must specify and use the brand (i.e., manufacturer) and type of sorbent used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless the Permittee documents in the site-specific performance test plan that affect adsorption and establish limits on those

parameters based on the sorbent used in the performance test.  
[63.1209(o)(4)]

- (i) In order to demonstrate compliance with the D.22.9(a)(2), the Permittee must monitor the pressure instantaneously and the automatic waste feed cutoff system must be engaged when negative pressure is not maintained at any time.
- (j) The Permittee must use CMS (e.g., thermocouples, pressure transducers, flow meters) to document compliance with the applicable operating parameter limits under this condition.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.22.16 Visible Emissions Notations**

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- (a) Visible emission notations of the MPTS baghouse stack exhaust and the generator stack shall be performed once per shift during normal daylight operations when the MPTS is in operation. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

**Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19][40 CFR 263.1211]**

**D.22.17 Record Keeping Requirements**

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- (a) Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAQ.
- (b) To document compliance with Condition D.22.1, the Permittee shall maintain records of the hours of operation of the MPTS and the fuel usage by the generator.
- (c) To document compliance with the NESHAP, the Permittee shall maintain all records required by 40 CFR 63.1210 and 40 CFR 63.1211, including, but not limited to, the following:

- (1) All information (including reports and notifications) required by this rule recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).**
- (2) All records as required by 40 CFR 63.10(b)(2) and (3) including:**
  - (A) Documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.**
  - (B) Records of applicability determination, including supporting analyses.**
- (3) All records of CEMS data required by 40 CFR 63.10(c).**

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**D.22.18 Reporting Requirements**

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- (a) The Permittee shall submit a semi-annual summary report which contains the information specified in 40 CFR 63.10(e)(3)(vi). If the total downtime for any CEMS or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee shall submit an excess emissions and CMS performance report along with the summary report.**
- (b) To document compliance with the NESHAP 40 CFR 63, Subpart EEE, the Permittee shall report the information required by 40 CFR 63, Subpart EEE including, but not limited to the following:**
  - (1) Compliance progress reports as required by 40 CFR 63.1211(b) and 40 CFR 63.10(d)(4).**
  - (2) As required by 40 CFR 63.10(d)(2) and 40 CFR 63.1207(j) the Permittee shall report the results of performance tests as part of the notification of compliance status, required in Section C - NESHAP Notification and Reporting Requirements.**
  - (3) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.**
  - (4) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event within two (2) working days after commencing actions inconsistent with the plan, by telephone call to the OAQ Compliance Section at (317) 233-5674 or facsimile (FAX) transmission at (317) 233-6865. The immediate report shall be followed by a letter within seven (7) working days after the end of the event, certified by the Permittee, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.**

- (5) Pursuant to 40 CFR 63.1206(c)(3)(vi), the Permittee shall report excessive exceedances.
- (6) Pursuant to 40 CFR 63.1206(c)(4)(iv), the Permittee shall report emergency safety vent openings.
- (c) In addition to being submitted to the address listed in Section C - General Reporting Requirements, all reports submitted pursuant to 40 CFR 60, Subpart A, or 40 CFR 63, Subpart A shall also be submitted to the U.S. EPA at the following address:

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

A "responsible official" as defined by 326 IAC 2-7-1(34), shall certify the reports.

#### **D.22.19 Reporting Requirements**

A quarterly summary of the information to document compliance with Condition D.22.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance Branch**

**Part 70 Quarterly Report**

Source Name: Naval Surface Warfare Center, Crane Division  
Source Address: 300 Highway 361, Crane, Indiana 47522  
Mailing Address: Building 3260, Code 09510, 300 Highway 361, Crane, IN 47522  
Source Modification No.: 101-14493-00005  
Facility: Contained Detonation Chamber  
Parameter: Net Explosive Weight (NEW)  
Limit: ~~1700~~ ~~1689~~ tons per consecutive twelve (12) month period, equivalent to ~~96.6~~ tons of carbon monoxide

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.



**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance Branch**

**Part 70 Quarterly Report**

**Source Name:** Naval Surface Warfare Center, Crane Division  
**Source Address:** 300 Highway 361, Crane, Indiana 47522  
**Mailing Address:** Building 3260, Code 09510, 300 Highway 361, Crane, IN 47522  
**Source Modification No.:** 101-14772-00005  
**Facility:** Mobile Plasma Treatment System  
**Parameter:** Hours  
**Limit:** 1800 hours per consecutive twelve (12) month period

**YEAR:**

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9            No deviation occurred in this quarter.

9            Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

**Submitted by:** \_\_\_\_\_  
**Title / Position:** \_\_\_\_\_  
**Signature:** \_\_\_\_\_  
**Date:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance Branch**

**Part 70 Quarterly Report**

**Source Name:** Naval Surface Warfare Center, Crane Division  
**Source Address:** 300 Highway 361, Crane, Indiana 47522  
**Mailing Address:** Building 3260, Code 09510, 300 Highway 361, Crane, IN 47522  
**Source Modification No:** 101-14772-00005  
**Facility:** Generator for the Mobile Plasma Treatment System  
**Parameter:** Gallons of diesel fuel  
**Limit:** 89,604 gallons per consecutive twelve (12) month period

**YEAR:**

Month	Column 1	Column 2	Column 1 + Column 2
	This month	gallons	gallons
Month 1			
Month 2			
Month 3			

9            No deviation occurred in this quarter.

9            Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

**Submitted by:** \_\_\_\_\_  
**Title / Position:** \_\_\_\_\_  
**Signature:** \_\_\_\_\_  
**Date:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_

Attach a signed certification to complete this report.

**Conclusion**

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 101-14772-00005, and the operation of this proposed modification shall be subject to the conditions of the proposed Part 70 Significant Permit Modification No. 101-14889-00005.

# Appendix A: Emission Calculations

Page 1 of 2 TSD App A

Company Name: **NSWC Crane MPTS**  
Address City IN Zip: **300 Highway 361, Crane IN 47522**  
CP#: **101-14772**  
Plt ID: **101-00005**  
Reviewer: **ERG/mh**  
Date: **6/7/02**

## MPTS Operating Limit

1800 hr/yr

## Generator Operating Limit

89,604 gal/yr

	Pollutant					
	PM	PM10	SO2	VOC	NOx	CO
<b>MPTS</b>						
Emission Rate After Controls (lb/hr) <sup>1</sup>	0.068	0.068	20.72	0	4.00	0.236
Unlimited <sup>2</sup> PTE (tons/yr)	0.30	0.30	90.75	0	17.52	1.03
(MPTS and Generator always run simultaneously)						
<b>Generator</b>						
Generator Emission Rate <sup>3</sup> (lb/hr)	0.60	0.60	1.22	1.30	24.23	3.00
Unlimited PTE (tons/yr)	2.63	2.63	5.34	5.69	106.13	13.14
Unlimited PTE for MPTS with generator (tons/yr)	2.93	2.93	96.10	5.69	123.65	14.17
<b>Limited PTE for MPTS with generator (tons/yr)</b>	0.60	0.60	19.75	1.17	25.41	2.91

## Project Emissions - MPTS and Contained Detonation Chamber (CDC)<sup>4</sup>

Limited PTE for MPTS with generator (tons/yr)	0.60	0.60	19.75	1.17	25.41	2.91
Limited PTE for CDC at 1700 tons NEW (tons/yr)	0.51	0.51	0.09	0.19	14.45	96.56
Combined PTE for MPTS and CDC <sup>5</sup> (tons/yr)	1.11	1.11	19.83	1.36	39.86	99.47
PSD Net Significant Increase (tons/yr)	25	15	40	40	40	100

<sup>1</sup> Emissions from the MPTS are a function of operating time, not the quantity of waste processed, because pollutants are generated by the arc itself.

MPTS emission rates are based on NESHAP limits in Subpart EEE.

<sup>2</sup> The MPTS unlimited PTE is after controls because controls are inherent to the emission factor and federally enforceable.

<sup>3</sup> Generator emission rates are from data sheet for 1000 kW Caterpillar 3512 engine at 65% load.

<sup>4</sup> IDEM OAQ has determined that the MPTS and the CDC (permit modification 101-14789-0005) are to be combined for comparison with PSD thresholds because both emission units perform a similar function (destruction of explosives for disposal) and are proposed to occur within a few months of each other.

<sup>5</sup> NEW - Net Explosive Weight

Appendix A: HAP Emission Calculations

Page 2 of 2 TSD App A

Company Name: **NSWC Crane MPTS**  
 Address City IN Zip: **300 Highway 361, Crane IN 47522**  
 CP#: **101-14772**  
 Plt ID: **101-00005**  
 Reviewer: **ERG/mh**  
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	Pollutant					
	Dioxins	Mercury	Lead and Cadmium	Arsenic, Beryllium & Chromium	HCl	Manganese
<b>MPTS</b> Potential Emissions <sup>1</sup> (lb/hr)	4.0E-10	9.0E-05	2.4E-04	1.9E-04	0.0646	4.8E-05
Unlimited Potential to Emit (tons/yr)	1.75E-09	3.94E-04	1.05E-03	8.32E-04	0.28	2.10E-04
Limited PTE at 2080 hr/yr (tons/yr)	4.2E-10	9.4E-05	2.5E-04	2.0E-04	0.07	5.0E-05

  

	Pollutant					
	Benzene	Toluene	Xylenes	Formaldehyde	Acrolein	Acetaldehyde
<b>Generator</b> 6.58 mmBtu						
Emission Factor <sup>2</sup> (lb/mmBtu)	7.76E-04	2.81E-04	1.93E-04	7.89E-05	7.88E-06	2.5E-05
Generator Emission Rate (lb/hr)	0.01	0.00	0.00	5.19E-04	5.19E-05	1.66E-04
Unlimited PTE (tons/yr)	0.02	0.01	0.01	2.28E-03	2.27E-04	7.27E-04

<sup>1</sup> Emissions from the MPTS are a function of operating time, not throughput.

MPTS emission rates are based on NESHAP limits in Subpart EEE.

<sup>2</sup> Generator emission factors are from AP-42 (Supplement B 10/96) Table 3.4-3 (SCC 2-02-004-01) large diesel engines